

Amendment and Response to Restriction Requirement

Applicant: James Duncan

Serial No.: 10/786,744

Filed: February 25, 2004

Docket No.: 1437.104.101/IT687US

Title: SMALL FORM FACTOR TRANSCEIVER FRONT PANEL ADAPTER

IN THE CLAIMS

Please add claims 20-30.

1. (Original) A transceiver module for use in an optical system, the transceiver comprising:
a housing configured for connection to a host;
a transceiver receptacle coupled to the housing, the transceiver receptacle having a first side defining a first interface portion and a second side defining a second interface portion;
a first adapter having a first connection portion configured to couple with the first interface portion;
a second adapter having a second connection portion configured to couple with the second interface portion; and
wherein the transceiver receptacle is configured to mate with a first front panel opening of a network device when the first and second adapters are not coupled with the transceiver receptacle, and wherein the transceiver receptacle is configured to mate with a second front panel opening of a network device when the first and second adapters are coupled with the transceiver receptacle, the first and second front panel openings of a network device being of different sizes.
2. (Original) The transceiver module of claim 1 wherein the first and second interface portions of the first and second sides are slots.
3. (Original) The transceiver module of claim 2 wherein the first and second connection portions of the first and second adaptors are arms extending from the adaptor, the arms of the first and second adapters being shaped to be received within the slots of the first and second sides of the transceiver receptacle.
4. (Original) The transceiver module of claim 1 wherein the first interface portion of the first side comprises a rear upper slot, a rear lower slot, a forward upper slot and a forward lower

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slot, and wherein the second interface portion of the second side comprises a rear upper slot, a rear lower slot, a forward upper slot and a forward lower slot.

5. (Original) The transceiver module of claim 4 wherein the first connection portion of the first adaptor comprises a first arm and a second arm each extending from the first adaptor and wherein the first arm of the first adaptor is configured to be received within the forward upper slot of the first side and the second arm of the first adaptor is configured to be received within the rear upper slot of the first side, and wherein the second connection portion of the second adaptor comprises a first arm and a second arm each arm extending from the second adaptor and wherein the first arm of the second adaptor is configured to be received within the forward lower slot of the second side and the second arm of the second adaptor is configured to be received within the rear lower slot of the second side.

6. (Original) The transceiver module of claim 5 wherein the first adaptor and the second adaptor are identically configured.

7. (Original) The transceiver module of claim 1 wherein the first front panel opening of a network device is an MT-RJ shaped opening and wherein the second front panel opening of a network device is an LC shaped opening.

8. (Original) The transceiver module of claim 1 wherein the transceiver receptacle is between 8.1mm and 9.1mm in height and wherein the transceiver receptacle is between 9.1mm and 10.1mm in width when the first and second adapters are not coupled with the transceiver receptacle and between 12.4mm and 13.3mm in width when the first and second adapters are coupled with the transceiver receptacle.

9. (Original) The transceiver module of claim 1 further including a first collar removably coupled over the transceiver receptacle when the first and second adapters are not coupled with the transceiver receptacle, and a second collar removably coupled over the transceiver receptacle

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when the first and second adapters are coupled with the transceiver receptacle, both the first and second collars having a plurality of springs coupled thereto.

10. (Original) A transceiver assembly comprising:

a transceiver module having a first end configured to be coupled with a host device and a second end configured to be coupled to the front panel opening of a network device, the second end having a first dimension and having an initial second dimension;

a first adapter;

a second adapter;

first connection means for coupling the first adapter to the second end of the transceiver module;

second connection means for coupling the second adapter to the second end of the transceiver module; and

wherein connecting the first and second adapter to the second end of the transceiver module changes the initial second dimension to a converted second dimension that is different from the initial second dimension.

11. (Original) The transceiver module of claim 10 wherein the first and second connection means include arms and slots provided on the first and second adapter and on the second end of the transceiver module, the arms and slots configured to complement each other such that the arms fit within the slots.

12. (Original) The transceiver module of claim 11 wherein second end of the transceiver module includes a first side and a second side, wherein the arms extend from the first and second adapters, and wherein the slots are defined in first and second sides of the second end of the transceiver module.

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13. (Original) The transceiver module of claim 12 wherein the first adapter is coupled to the first side of the second end of the transceiver module and the second adapter is coupled to the second side of the second end of the transceiver module.

14. (Original) The transceiver module of claim 10 wherein the first and second adapters are coupled to the second end of the transceiver module using an adhesive.

15. (Original) The transceiver module of claim 10 wherein the first adaptor and the second adaptor are identically configured.

16. (Original) The transceiver module of claim 10 wherein the second end of the transceiver having the initial second dimension can be coupled to the front panel opening of a network device with a first dimension and the second end of the transceiver having the converted second dimension can be coupled to the front panel opening of a network device with a second dimension.

17. (Original) The transceiver module of claim 10 further including a first collar removably coupled over the second end of the transceiver module when the first and second adapters are not coupled with the second end of the transceiver module, and a second collar removably coupled over the second end of the transceiver module when the first and second adapters are coupled with the second end of the transceiver module, both the first and second collars having a plurality of springs coupled thereto.

18. (Original) A method for converting a transceiver initially configured to interface with a first-sized front panel opening of a network device to a transceiver configured to interface with a second-sized front panel opening of a network device comprising:

providing the transceiver with a receptacle configured to be coupled with the first-sized front panel opening of a network device and with an end configured to be coupled with a host device, the receptacle having a first and a second side, wherein the first and second sides each define interface portions;

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coupling a first adapter to the first side of the receptacle, the first adapter having a connection portion configured to couple with the interface portion defined by the first side of the receptacle;

coupling a second adapter to the second side of the receptacle, the second adapter having a connection portion configured to couple with the interface portion defined by the second side of the receptacle; and

wherein the transceiver receptacle mates with the second sized-optical connector after the first and second adapters are coupled to the transceiver receptacle.

19. (Original) The method of claim 18 further including coupling the transceiver receptacle to a front panel opening of a network device having an LC shape after the first and second adapters are coupled to the transceiver receptacle.

20. (New) The transceiver assembly of claim 10 wherein the first end of the transceiver module comprises a housing configured for connection to the host device.

21. (New) The transceiver assembly of claim 20 wherein the second end of the transceiver module comprises a transceiver receptacle coupled to the housing.

22. (New) The transceiver assembly of claim 21 wherein the transceiver receptacle has a first side defining a first interface portion and a second side defining a second interface portion, wherein the first adapter has a first connection portion configured to couple with the first interface portion, wherein the second adapter has a second connection portion configured to couple with the second interface portion, and wherein the transceiver receptacle is configured to mate with a first front panel opening of a network device when the first and second adapters are not coupled with the transceiver receptacle, and wherein the transceiver receptacle is configured to mate with a second front panel opening of a network device when the first and second adapters are coupled with the transceiver receptacle, the first and second front panel openings of a network device being of different sizes.

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23. (New) The transceiver module of claim 22 wherein the first and second interface portions of the first and second sides are slots.

24. (New) The transceiver module of claim 23 wherein the first and second connection portions of the first and second adaptors are arms extending from the adaptor, the arms of the first and second adapters being shaped to be received within the slots of the first and second sides of the transceiver receptacle.

25. (New) The transceiver module of claim 22 wherein the first interface portion of the first side comprises a rear upper slot, a rear lower slot, a forward upper slot and a forward lower slot, and wherein the second interface portion of the second side comprises a rear upper slot, a rear lower slot, a forward upper slot and a forward lower slot.

26. (New) The transceiver module of claim 25 wherein the first connection portion of the first adaptor comprises a first arm and a second arm each extending from the first adaptor and wherein the first arm of the first adaptor is configured to be received within the forward upper slot of the first side and the second arm of the first adaptor is configured to be received within the rear upper slot of the first side, and wherein the second connection portion of the second adaptor comprises a first arm and a second arm each arm extending from the second adaptor and wherein the first arm of the second adaptor is configured to be received within the forward lower slot of the second side and the second arm of the second adaptor is configured to be received within the rear lower slot of the second side.

27. (New) The transceiver module of claim 26 wherein the first adaptor and the second adaptor are identically configured.

28. (New) The transceiver module of claim 22 wherein the first front panel opening of a network device is an MT-RJ shaped opening and wherein the second front panel opening of a network device is an LC shaped opening.

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29. (New) The transceiver module of claim 22 wherein the transceiver receptacle is between 8.1mm and 9.1mm in height and wherein the transceiver receptacle is between 9.1mm and 10.1mm in width when the first and second adapters are not coupled with the transceiver receptacle and between 12.4mm and 13.3mm in width when the first and second adapters are coupled with the transceiver receptacle.

30. (New) The transceiver module of claim 22 further including a first collar removably coupled over the transceiver receptacle when the first and second adapters are not coupled with the transceiver receptacle, and a second collar removably coupled over the transceiver receptacle when the first and second adapters are coupled with the transceiver receptacle, both the first and second collars having a plurality of springs coupled thereto.